

## **CLAIMS**

1. In a respirator hood designed to fit over and around the head of a wearer, and including a substantially transparent lens received in a front opening of the hood, the improvement comprising:  
an inflatable neck cuff positioned near a lower portion of the hood and substantially circumscribing an opening through which the wearer inserts his head, said inflatable neck cuff being supplied by an air source and inflated so as to exert a sealing pressure against the neck of the wearer and to prevent the hood from rising up relative to the head of the wearer.
2. The respirator hood as recited in claim 1, and further comprising one or more overhead channels which define an air delivery path from the air source over the head of the wearer to the interior of the lens and downwardly across the face of the wearer.
3. The respirator hood as recited in claim 2, and further comprising an air reservoir, said air reservoir receiving air from the air source and then distributing air to the inflatable neck cuff and said one or more overhead channels.
4. The respirator hood as recited in claim 2, wherein there are at least three overhead channels.
5. The respirator hood as recited in claim 3, wherein there are at least three overhead channels.

6. The respirator hood as recited in claim 1, and further comprising an integral exhalation valve in an exterior surface of said hood, said valve opening when air pressure within the hood exceeds a predetermined value.

7. The respirator hood as recited in claim 6, wherein said exhalation valve includes an opening through the exterior surface of said hood and a covering that extends over the opening, said covering being bonded to the hood, but overcoming the bond and pulling away from the hood to open said exhalation valve should the air pressure within the hood exceed the predetermined value.

8. A respirator hood designed to fit over and around the head of a wearer, comprising:

a substantially transparent lens received in a front opening of the hood; an inflatable neck cuff positioned near a lower portion of the hood and substantially circumscribing an opening through which the wearer inserts his head, said inflatable neck cuff being supplied by an air source and inflated so as to exert a sealing pressure against the neck of the wearer and to prevent the hood from rising up relative to the head of the wearer; and

one or more overhead channels which define an air delivery path from the air source over the head of the wearer to the interior of the lens and downwardly across the face of the wearer.

9. The respirator hood as recited in claim 8, and further comprising an air reservoir, said air reservoir receiving air from the air source and then distributing air to the inflatable neck cuff and said one or more overhead channels.

10. The respirator hood as recited in claim 8, wherein there are at least three overhead channels.

11. The respirator hood as recited in claim 9, wherein there are at least three overhead channels.

12. The respirator hood as recited in claim 1, and further comprising an integral exhalation valve in an exterior surface of said hood, said valve opening when air pressure within the hood exceeds a predetermined value.

13. The respirator hood as recited in claim 12, wherein said exhalation valve includes an opening through the exterior surface of said hood and a covering that extends over the opening, said covering being bonded to the hood, but overcoming the bond and pulling away from the hood to open said exhalation valve should the air pressure within the hood exceed the predetermined value.